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ABSTRACT

Project Cumbre, the bilingual education program at the Ann Street Bilingual School in Hartford, Connecticut, was evaluated for the 1981-82 school year. The school was attended by 279 students in kindergarten through grade 6, of whom the majority were Hispanic. The participants, program, and objectives are described. Results are reported on (1) kindergarten oral language and basic concepts, (2) grades 1 through 6 oral language skills, (3) grades 2 through 6 Spanish reading and math, (4) grades 3 through 6 English reading and math, (5) reading and math progress of graduates, (6) followup of Project Cumbre graduates, (7) comparison of project participants with mainstream Hispanic students, (8) recordkeeping of minimum competencies, and (9) parent involvement. A 4-year summary of Project Cumbre's progress is presented. Overall, the students showed great progress in oral language skills and reading but did not perform as expected in math. Recommendations are made regarding expansion of reading instruction, review of the approach to math instruction, and acquisition of data on Hispanic mainstream students. (RW)

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THE 1981-82 EVALUATION OF THE TITLE VII BILINGUAL PROGRAM

PROJECT CUMBRE

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1981-82 EVALUATION OF THE ANN STREET BILINGUAL SCHOOL'S PROJECT CUMBRE

The Participants, the Program, and Objectives

School year 1981-82 was the fourth year of Title VII federal support for Project CUMBRE at Hartford's Ann Street Bilingual School. The federal source provided a director, a coordinator, other specialists, teacher assistants, and staff and parent training. The city of Hartford provided the support for classroom teachers and the cost of operating the school plant.

Of Hartford's 21,434 students, 9,262 were Hispanic. Hispanics attended 30 of the city's public schools in 1981-82. All of the schools offered bilingual or ESL options, but only Ann Street Bilingual School offered a total bilingual curriculum. A total of 279 students attended Ann Street Bilingual School in 1981-82. The overwhelming majority of students were Hispanics (98½%), 1% were Black, and ½% Caucasion. Figures from the previous school year indicated that 68% of the enrollment was Spanish dominant, 26% bilingual and 6% English dominant. Previous year federal school lunch data showed that 86% of the parents of the students attending Ann Street Bilingual School earned below $10,250 annually.

Twelve classroom teachers, along with educational assistants provided the instructional program. For Spanish dominant students, the instructional program started in the mother tongue. At the same time, the student received instruction in Spanish, he/she also participated in English language classes. The amount of English language help increased gradually up through the grade levels. There were some variations in this approach due to some students' needs and abilities, but the typical progression from native tongue to the second language started with 80% native instruction and 20% second language at kindergarten progressing to 40% native language and 60% second language by grade 6.

For English language instruction, primary grade students were placed into six homogeneous levels of English language proficiency. Each Monday through Friday for a 45 minute period, students were exchanged among six primary grade teachers to form linguistically homogeneous groups. In the intermediate grades, students received one 45 minute period daily of English language enrichment. As in the primary grades, students were grouped homogeneously for this instruction. Staffing was increased during this period by the addition of a reading enrichment specialist working along with the intermediate grade teachers. A further regrouping in the intermediate grades was made for the teaching of English reading, Spanish language art, and mathematics.

At both the primary and intermediate levels, teachers instructed their own homeroom students in social studies, science, and health. Also occurring in the homeroom setting, part-time specialists instructed students in art, music, and physical education.

Besides classroom teachers and educational assistants, a language specialist and a resource teacher helped teachers plan their instructional programs, diagnose needs of students, and help staff obtain educational materials. In addition, there were two counselors who worked with students needing attention because of behavior, personality, achievement, and/or school

attendance and a community worker who served as a liaison between school, parents, and community.

Grade level distribution for the 279 students attending the Ann Street Bilingual School in 1981-82 was as follows.

K	1	2	3	4	5	6	Total
62	52	31	41	44	26	23	279

The program objectives established for the Title VII CUMBRE Project have been listed below. The evaluation of results for the 1981-82 school year was in terms of these objectives.

Objective 1: Kindergarten pupils on the average will improve significantly (p .05) over the course of the school year in Spanish oral language proficiency as measured by Language Assessment Scales and in basic concepts in English as measured by the Boehm Test of Basic Concepts.

Objective 2: Grade 1-6 students on the average will improve significantly (p .05) over their previous year skill levels in English and Spanish oral langual proficiency as measured by Language Assessment Scales.

Objective 3: Grade 2-6 students grouped by grade levels will exceed norm group rate of growth over a twelve month period in the areas of Spanish reading and math computation as measured by CTBS Espanol.

Objective 4: Grade 3-6 students grouped by grade levels will exceed norm group rate of growth over a twelve month period in the areas of English reading and mathematics as measured by the Metropolitan Achievement Tests.

Objective 5: Grade 7 students (Ann Street Bilingual School graduates) will exceed norm group rate of growth over a 12 month period in the area of English reading and mathematics as measured by the Metropolitan Achievement Tests.

Objective 6: The 95 graduates of the Ann Street Bilingual School since the first year of CUMBRE funding will be followed up expecting their grade 7-9 English reading achievement by grade grouping to exceed their grade 6 national percentile attainment.

Objective 7: Ann Street Bilingual School 12 month reading and math growth by grade level will be compared to that of Hispanic mainstreamers based on Metropolitan Achievement Tests scores, expecting Bilingual School student growth in grades 4-6 to equal that of Hispanic mainstreamers.

Objective 8: Ann Street Bilingual School teachers will have maintained records of the minimum competencies passed by their students in the areas of math, language arts, science, and social studies during the 1981-82 school year.

Objective 9: During the 1981-82 school year, 60% of all parents of Bilingual School students will be expected to visit the school; a minimum of three parents per classroom will be expected to offer their services for school activities and functions; and a minimum of 20 parents will take part in the parent education programs offered by the school.

Results in Terms of Program Objectives

The results section of this report start with background information available about each objective followed by the method of analysis, and then the presentation of the evidence of accomplishments in terms of the objective.

Kindergarten oral language and basic concepts

Project CUMBRE made possible a full-day program for kindergarteners. During morning hours, children studied Spanish language development (40 minutes), fine motor skills activities (15 minutes), arithmetic (15 minutes), activities involving visual perception skills (15 minutes) and activities involving auditory perception skills (15 minutes). In the afternoon, children received English language help (30 minutes), social studies (30 minutes), and science (30 minutes). Supervised free play was also part of the day's program.

Twelve children who were not considered ready for first grade instruction at the close of the 1980-81 school year attended a transitional program during 1981-82 which included Spanish language (60 minutes), and mathematics (60 minutes) during morning hours, and English language help (50 minutes), and Spanish reading, social studies and science (50 minutes) during afternoon instruction. An art specialist supplemented the Spanish language offering.

Two instruments used to measure kindergarten children attainment and progress were the Language Assessment Scales (LAS) in English and Spanish and the Boehm Test of Basic Concepts. LAS was administered at yearend only, to provide an overall picture of the child's oral linguistic proficiency in English and Spanish. It is a language tool which accommodates ethnic and linguistic differences which was administered individually to each child by a tester from the Hartford Board Office of Evaluation, Research and Testing. The Hartford Board tester also scored the Boehm Test of Basic Concepts which was administered orally by classroom teachers in each of the two kindergarten classes and the transitional program class. This test measures children's mastery of English language concepts considered necessary for achievement in the first years of schooling.

The methods used to analyze results were: the translation of average yearend total LAS scores into a normative interpretation, and the application of a t statistic to LAS scores separately for kindergarteners and the transitional class. Results were as follows:

Kindergarten LAS Results (Spring 1982)

Oral English Proficiency			Oral Spanish Proficiency		
N	RS	SD	N	RS	SD
62	27.8	23.5	62	56.2	17.3

Kindergarten Boehm Basic English Concepts Results

	N	RS	SD	r	t value	Significance
Kindergarten Children						
Fall 1981	34	21	6.3	.38	16.840	.001 level
Spring 1982	34	38.6	4.3			
Transition Program Children						
Spring 1981	8	31.4	3.6	.26	2.270	.05 level
Spring 982	8	37	5.1			

Interpreting LAS results first, one finds kindergarten and transitional class children on the average scoring at a proficiency level of "1" in English language skills. A rating of "1" is considered a non-English speaker with total linguistic deficiencies. Only 12 of the 52 children tested scored higher than a "1" rating in the yearend testing which emphasizes the second language handicap with which these children began school. In Spanish oral language skills, the combined children on the average reached a proficiency level of 2. A rating of "2" by the tester is considered a non-Spanish speaker with apparent linguistic deficiencies. Only 18 individual children received a rating higher than "2" in the yearend testing which clearly showed kindergarteners and transitional class children almost as severely handicapped in their Spanish oral language skills as they were in their English language skills at the close of the school year.

Analysis of Boehm basic concept testing showed children in both kindergarten and transitional class making statistically significant gains in understanding basic English concepts such as "bigger, below, behind, and above." Kindergarteners made greater progress than transitional class children. Both groups began at approximately the 35th national percentile. No percentile norms were available for yearend scores.

Grade 1-6 oral language skills

The LAS instrument was also individually administered at yearend to students in grades 1-6 at the Ann Street Bilingual School by the Hartford Board tester. Selecting only matched scores of students from two successive spring testings, results were obtained for 62% of all grade 1-6 students in English and 67% of all grade 1-6 students in Spanish. The size of the sample is minimally representative of students enrolled at those grade levels. Results for both English and Spanish oral language follow.

Grade 1-6 Oral Language Skills

Grade Level	Test Date	N	RS	SD	r	t value	Significance
Oral English							
1	Spg. 81	25	34.3	31.4	.61	4.209	.01 level
	Spg. 82		55.3	17.8			
2	Spg. 81	19	61.1	20.2	.82	1.912	.05 level
	Spg. 82		66.8	22.9			
3	Spg. 81	34	61.5	26.3	.70	4.277	.01 level
	Spg. 82		75.3	18.5			
4	Spg. 81	23	85.6	12.6	.64	2.236	.05 level
	Spg. 82		90.2	9.3			
5	Spg. 81	16	89.6	7.9	.60	3.156	.01 level
	Spg. 82		84.4	6.7			
6	Spg. 81	17	89.6	11.3	.40	0.750	not significant
	Spg. 82		87.5	10			
Oral Spanish							
1	Spg. 81	33	65.7	21.9	.77	5.429	.01 level
	Spg. 82		79.7	11.6			
2	Spg. 81	21	78.4	15.4	.67	0.703	not significant
	Spg. 82		80.3	15			
3	Spg. 81	35	82.8	12.2	.59	3.556	.01 level
	Spg. 82		88.7	7.7			
4	Spg. 81	23	89	9.8	.37	1.182	not significant
	Spg. 82		91.4	6.6			
5	Spg. 81	16	93.3	5.5	.33	3.264	.01 level
	Spg. 82		87.9	6			
6	Spg. 81	17	94.1	6.5	.41	2.307	.05 level
	Spg. 82		89.3	8.6			

Results show statistically significant advancement in English oral language skills for grades 1-4; only chance differences in average scores for grade 6 students; and significant regression for students of grade 5. In Spanish language skills, statistically significant advancements were made by students in grades 1 and 3; only chance variation in average scores at grades 2 and 4; and statistically significant regression of scores for students in grades 5 and 6.

At first glance, it would appear that grade 5 and 6 students fell considerably in English and Spanish oral language skills at both grades 5 and 6. However, there were limiting circumstances as the level score distribution of LAS results on the following page show. Up through grade 2, distributions of English oral proficiency scores were fairly widely distributed over the levels 1-5 scale. Thereafter, scores tended to bunch up near the ceiling of the test with almost three-quarters of grade 4-6 students rated at the highest proficiency level of the test.

The same was true for Spanish oral language level distributions, only the bunching up of level ratings at the ceiling of the instrument began as early as grade 1 with about four-fifths of all proficiency ratings at the highest level of the test for grade 4-6 students.

A more valid interpretation of results would be that Ann Street Bilingual School students advanced significantly in English oral language skills until students in higher grade levels began to score near the ceiling of the instrument which then limited their potential to show growth. In Spanish, advancement was not as strong, with significant oral language gains taking place in only half of the grade groupings before students in the upper grades began scoring at the ceiling of the instrument.

Grade 2-6 Spanish reading and math

The CTBS Espanol is administered in the spring of each school year to bilingual program students in the Hartford public schools. A measure of Spanish reading and Spanish math was obtained for the project by using matched scores of students for two successive spring testings. Matched scores were available for 128 students which was 78% of all project students in grades 2-6. Hence, the results were representative of all the students in those grades.

Reliability of the pre-posttest scores was low for students in grade 3 in Spanish math; otherwise, results are minimally acceptable to good for all other grade level groupings of test information. Test results follow:

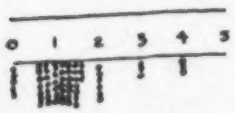
	Spanish Reading				Spanish Math Computation			
		Spg. 81	Spg. 82			Spg. 81	Spg. 82	
Grade	N	%ile	%ile	r	N	%ile	%ile	r
2	24		52.3		25		66	
3	31	31.3	36.6	.48	30	38.1	27	.25
4	34	27.6	45.7	.76	34	52.3	59.3	.71
5	21	29.6	30	.59	21	35.5	40.5	.46
6	17	22	32.3	.65	18	36.6	52.6	.69
	Across Grades: 5.5 NCE				Across Grades: 1.4 NCEs			

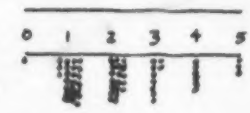
Distributions of Language Assessment Scales Level Scores

English LAS

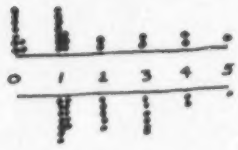
Spanish LAS

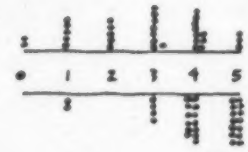
Kindergarten
Spring 1982 Levels



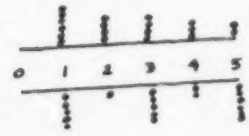


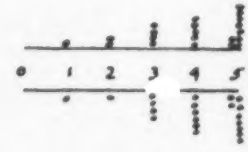
Spring 1981 Levels
Grade 1
Spring 1982 Levels



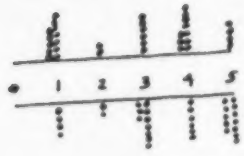


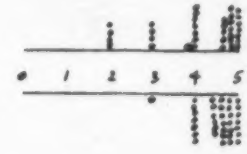
Spring 1981 Levels
Grade 2
Spring 1982 Levels



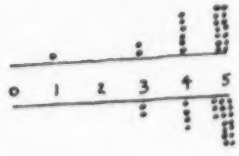


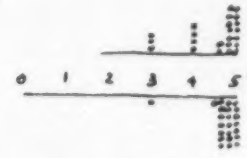
Spring 1981 Levels
Grade 3
Spring 1982 Levels



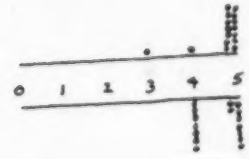


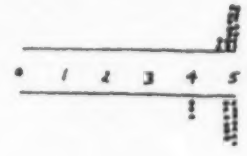
Spring 1981 Levels
Grade 4
Spring 1982 Levels



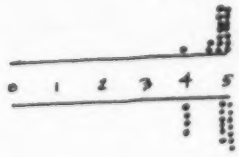


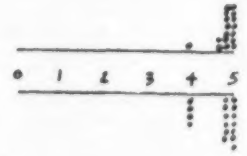
Spring 1981 Levels
Grade 5
Spring 1982 Levels





Spring 1981 Levels
Grade 6
Spring 1982 Levels





Students on the average by grade groupings increased their Spanish reading percentiles at grades 3, 4, and 6, but only maintained their percentile standing at grade 5. In Spanish math, students increased their national percentile standings on the average at grades 4-6, but regressed in percentiles at grade 3. Viewing progress across grade levels, it can be said that students generally progressed at norm group rate of growth in math computation, but exceeded norm group growth about one quarter of a standard deviation (5.5 NCEs) in Spanish reading. The Spanish reading growth should be viewed as educationally significant.

It is also worth noting that students at grade 2 in Spanish reading and at grades 2, 4, and 6 in math computation scored above grade level at the close of the 1981-82 school year.

Grade 3-6 English reading and math

The Metropolitan Achievement Tests were administered to Ann Street Bilingual School students during the spring of 1981 and also in the Spring of 1982. The Reading and Mathematic subtests were used. Matched scores were obtained for 77% of all of the students enrolled at those grades making the results highly representative of the school students in these grade levels.

Reliability of pre-posttesting was fair to excellent as can be judged by the pre-posttest correlation coefficients that ranged between .76 to .87 in reading and between .63 to .84 in mathematics. These findings enhance the credibility of the results presented in table form below.

	Reading (in English)				Mathematics (in English)			
		Spg. 81	Spg. 82			Spg. 81	Spg. 82	
Grade	N	%ile	%ile	r	N	%ile	%ile	r
3	30	5.2	12.3	.80	30	32.2	23.1	.63
4	34	13.8	24	.76	34	38.4	34.2	.69
5	21	8.8	8.1	.87	21	17.5	18.1	.68
6	18	11.5	26.2	.82	18	14.2	20.2	.84
	Across grades = 7.4 NCEs				Across grades = -1.5 NCEs			

Students on the average by grade levels increased their English reading percentiles at grades 3, 4, and 6 while maintaining their percentile standing at grade 5. In English mathematics, students increased their percentile standings at grades 5 and 6, but decreased in percentiles at grades 3 and 4. Viewing results across grade levels, the math results indicate students progressing at a little less than norm group growth while gains in English reading exceeded norm group rate of growth by a third of a standard deviation (7.4 NCEs). The English reading growth can be considered educationally significant progress beyond that of norm group rate of growth.

Reading and math progress of graduates

Test scores for grade 7 students who were Ann Stret Bilingual School graduates were reviewed to determine whether they continued to show progress in

basic skills studies. Matched test scores from the citywide administered Metropolitan Achievement Tests were obtained for 22 students which represented 71% of all the students who graduated f rom Ann Street Bilingual School's grade 6 at the close of the 1980-81 school year.

The reliability of the testing based on the correlation coefficient obtained from the matched test scores was excellent for both the reading and math subtest results as shown below.

	Reading				Mathematics			
Grade	N	Spg 81 %ile	Spg 82 %ile	r	N	Spg 81 %ile	Spg 82 %ile	r
7	22	21.2	24.7	.92	22	20.4	30.9	.85

The graduates did indeed continue to show progress as they increased their percentile standing in both reading and math. The math progress reached a level of educational significance beyond that which might be expected of national norm students.

Follow-up of graduates since the first year of CUMBRE

A total of 95 students were in the grade 6 classes of the Ann Street Bilingual School since the first year of the CUMBRE Program...31 in 1979, 32 in 1980, and 32 in 1981. The Hartford Board Office for Evaluation, Research & Testing records were reviewed to find out student progress in reading. Another part of the follow-up was an analysis of a survey sent to Quirk Middle School teachers from the Director of the Ann Street Bilingual School requesting their rating of school progress for each identified student enrolled at that school. The survey request form appears as Attachment A to this report.

Reading test scores were found for 22 students from the 1980-81 class and 18 students from the 1979-80 class; however, students from the 1978-79 class who would have begun high school could not be found. Results of reading tests for the student scores located follow.

English Reading of Graduates

Grade	N	Spg. 81 %ile	Spg. 82 %ile	r
7	22	21.2	24.7	.92
Grade	N	Spg. 80 %ile	Spg. 82 %ile	r
8	18	18	32.1	.77

Scores for students from both classes showed increased percentile standings for these students over the 12 month and 24 month periods between the citywide testing dates indicated. Twelve month students progressed a little faster than national norm students (2.4 NCEs) while 24 month students advanced at a rate

significantly higher than norm group progress (9.5 NCEs). The rate of gain of the latter was almost a half of a standard deviation more than the rate expected of the national norm group.

Quirk Middle School teachers returned survey ratings of school progress of 42 students who were Ann Street graduates of previous years. The results of the survey appear on the following page.

The results of the survey indicate Ann Street graduates as a group attending school much more often and getting along with classmates much better than other students at the school of the same grade level; generally doing homework and participating in class somewhat more often than other students at the school of the same grade level; and perhaps getting school grades a little better than the other students at the school of the same grade level.

Overall, the results for Ann Street Bilingual School graduates showed students attending school regularly, doing homework and participating in class often, getting along with classmates well, and making better than norm group progress in English reading skills.

Ann Street progress compared to that of Hispanic mainstream students

A total of 2,154 Hispanics were identified in Hartford public school mainstream programs in grades 2-6 near the close of the 1981-82 school year. Metropolitan Achievement Tests were administered each spring to these students the same as it was to others in the regular classes. During June 1982, the Hartford Board Office of Evaluation, Research & Testing was used to locate test scores for identified Hispanic students. Scores could only be obtained for a small sample of these students at that time (5%). Even though the sample of scores for mainstream Hispanics was very limited, their results were compared to the reading and math progress of Ann Street Bilingual School students who were administered the tests during the same months using the same citywide testing procedures. Since mainstream Hispanics were exposed to considerably more English language instruction, CUMBRE project expectations were that Ann Street Bilingual School students would equal rather than exceed Hispanic mainstream student English reading and math rate of gain. A comparison of results for the two groups follows.

School Progress of Ann Street Graduates

Compared to other students of the same grade level at Quirk Middle School, Ann Street graduates:

a. Attend school...

N	more often	about the same as	less often	uncertain
	xxxxxxxxxx	xxxxx	xxxxx	
	xxxxxxxxxx	xx	xxx	
42	xxxxxxx			
	(64%)	(17%)	(19%)	

b. Do homework...

N	more often	about the same as	less often	uncertain
	xxxxxxxx	xxxxxxx	xxxxx	
	xxxxx	xxxxx	xx	
42	xxxxx	xxxxx		
	(43%)	(40%)	(17%)	

c. Participate in class...

N	more often	about the same as	less often	uncertain
	xxxxxxxxx	xxxxx	xxxxx	
	xxxxx	xxxxx	xxxxx	
42	xxxxx	xxx		
	(45%)	(31%)	(24%)	

d. Get along with classmates...

N	better than	about the same as	not as well	uncertain
	xxxxxxxxxx	xxxxx	xxxxx	
	xxxxxxx	xxxxx	x	
42	xxxxx	xxxx		
	(53%)	(33%)	(14%)	

e. Get school grades...

N	better than	about the same as	not as good as	uncertain
	xxxxxxx	xxxxx	xxxxx	
	xxxxx	xxxxx	xxxxx	
42	xxxxx	xx	xxx	
	(40%)	(29%)	(31%)	

Bilingual School Progress Compared to Hispanic Mainstream Progress

Ann Street Bilingual					Hispanic Mainstream			
				Reading (in English)				
Grade	N	Spg. 81 %ile	Spg. 82 %ile	r	N	Spg. 81 %ile	Spg. 82 %ile	r
3	30	5.2	12.3	.80	-			
4	34	13.8	24	.76	5	10.8	13.9	.73
5	21	8.8	8.1	.87	47	7.3	11.3	.79
6	18	11.5	26.2	.82	31	11.1	21.9	.64
Gain Across Grades:			6.4 NCEs			Gain Across Grades:		6.6 NCEs
				Mathematics (in English)				
3	30	32.2	23.1	.63	-			
4	34	38.4	34.2	.69	5	16.3	29.5	.22
5	21	17.5	18.1	.68	47	11.2	16	.59
6	18	14.2	20.2	.84	31	15.8	23.9	.81
Gain Across Grades:			0.3 NCEs			Gain Across Grades:		5.5 NCEs

The results show Ann Street Bilingual School students about equaling the progress of Hispanic mainstreamers in English reading, but showing less progress in English math than Hispanic mainstreamers. Hispanic mainstreamers showed almost a third of a standard deviation growth (6.6 NCEs) in reading and a quarter of a standard deviation growth (5.5 NCEs) in math above national norm group progress. Ann Street Bilingual School students also made about a third of a standard deviation growth (6.4 NCEs) in reading, but for all practical purposes, progressed at a rate about equal to that of national norm group students in math (0.3 NCEs).

Maintaining records of minimum competencies

The ninth objective expected that Ann Street Bilingual School staff would maintain records of the minimum competencies, passed by their students in the areas of math, language arts, science, and social studies during the 1981-82 school year.

Minimum competencies have been established for Hartford Public School students in basic skill areas for each grade. Tests of minimum competencies are expected to be administered following the study of specific materials in any of several recommended textbooks, or other materials used in the Hartford curriculum. The minimum competencies provided in the curriculum guide for

primary grades are mostly suggestive of what can be done while the minimum competency test items developed for the upper grades can be used as written. The minimum comptencies provided are designed to provide the teacher with a model for testing. The actual tests have to be prepared and duplicated for use by each teacher. All of the minimum comptencies are expected to be included in the classroom instruction and must be tested.

At the Ann Street Bilingual School, staff had recorded minimum comptencies passed by their students in the areas of English, language arts, and math according to the school's Language Specialist. This was based on her regular visits to Ann Street Bilingual School clasrooms during the 1981-82 school year, the first year that the staff in this school has incorporated this practice in their instructional efforts.

Parent involvement in school activities

The objectives of Project CUMBRE expected parents to visit the school often, offer their services for school activities and functions, and take part in parent education programs that were offered by the school. The feeling was that school staff either encourage or discourage parent involvement by the way they welcome parents, invite them to be part of the school activities, and take the initiative in discussing the school progress of their children. Viewing expectations of parent participation in this light, staff expected a majority of the parents to just come visit the school during the year; expected a minimum of three parents per classroom to offer their services to participate in major school activities or functions; and a minimum of 20 parents to take part in the parent education programs offered by the school.

School staff kept records of parent participation and the evaluator analyzed these records to determine whether this objective was met.

More than a majority of parents visited the school during 1981-82. In all, 76% of the children's parents came into the school. Also, more than just three parents per classroom took major responsibilities in school functions. Three times this number made major contributions. Some of the school services parents performed were:

- Participation in the Title VII proposal design.
- Helped plan the grade 6 graduation program.
- Took on responsibilities for the Ann Street School Field Day.
- Responsibility for and preparation of a teacher/parent luncheon.
- Organized a Halloween party for the students.
- Helped organize, cook, and serve a Thanksgiving dinner at the school.
- Participated in Board of Education meetings concerning the Ann Street/Barnard Brown school merger.
- Accompanied teacher and children on trips away from the school.
- Organized, served, and helped out on the Parent Graduation meeting.
- Helped in the classroom every week.
- Served as classroom representative.
- Helped put on a Christmas party.
- Served as a school monitor.

- Provided bulletin board materials.
- Attended Parent Advisory council meetings.
- Organized school program for Puerto Rican Discovery Day.
- Helped organize the school's "Spelling Bee" program.

The third aspect of parent involvement expected a minimum of 20 parents attend school sponsored parent education courses. Actually, 58 parents participated in four school sponsored activities. The names of these offering, dates, and the number of parents who attended follow:

Name of offering	Dates of offering	Number of parents attending
Nutrition class (four workshops)	9/20 - 11/3/81	15
Macrame	1/4/82	10
Red Cross courses	3/5/82	8
Orientation about voting	9/10/81	25

Four Year Summary of CUMBRE Progress

In any last year evaluation of a multi-year funded program, it would be important to review highlights of the progress of students and the program over the years represented.

During CUMBRE's first year, 1978-79, Bilingual school staff involvement in professional development activities and parent participation in school activities were among the most positive findings. Both teachers and parents more than met the standards established in program objectives. Bilingual school student achievement in reading and math, however, was anything but spectacular with non-bilingual program student achievement from a comparison school out-distancing Ann Street student progress in English reading, and equaling Ann Street School progress in math computation.

In the second year of the program, self-concept testing showed Ann Street Bilingual School students very positive concerning the values they held about their own importance and general competence, and also about the influence of schooling upon their lives. In two other areas of self-concept testing (social maturing and self security), Ann Street students were found responding much less positively than norm group students to whom they were compared. Another important finding during the second year of the program was that almost three-quarters of the school's grade 3-6 students had three or more continuous years of enrollment in the school whereas only one-fifth of the grade 3-6 bilingual program students from three other Hartford schools had three or more continous years of bilingual programming.

In the third year of CUMBRE, evaluation results showed the strongest evidence of kindergarten program advancement in Spanish oral language skills and in English basic concept understanding. And for the first time, evaluation results showed CUMBRE students making very significant progress in English reading skills.

Year 4 results, the major purpose of this report, showed exceedingly good progress for Ann Street graduates who could be followed-up at the Quirk Middle School. Not only did these students show advancement in reading percentile attainment, they were rated as attending school much more regularly and getting along with classmates much better than their counterpart at the Quirk Middle School. Further, they were rated as doing homework and participating in class somewhat more often than other students from the same grade levels at Quirk.

Perhaps the most important aspects of any four year project summary would be an analysis of evidence from the major evaluation instruments administered over the period of the project. The tables of test information provided on the next four pages do just that. Instruments measuring English reading and math computation, Spanish reading and math computation, and instruments measuring oral language skills in both English and Spanish were administered in almost every year of the program. The most encouraging results were those for English reading followed closely by results for English oral language skills and Spanish reading during the last year. The most disappointing was the results for math progress. More details about the results are presented in the paragraphs to follow.

English Reading and Math Over the Four Years of CUMBRE

Metropolitan Achievement Tests

Total Reading				Math Computation		
1978-79	N	Pre %ile	Post %ile	N	Pre %ile	Post %ile
Grade 3	10	2	6	24	16	15
Grade 4	25	15	17	31	11	10
Grade 5	25	8	7	30	9	12
Grade 6	17	10	10	23	12	10
Gain Across Grades:		1.4 NCEs		Gain Across Grades:		-0.1 NCEs
1979-80						
Grade 3	1	11	42	24	39	17
Grade 4	9	9	6	16	12	14
Grade 5	14	22	17	17	19	33
Grade 6	13	10	12	14	15	16
Gain Across Grades:		-1.1 NCEs		Gain Across Grades:		-3.2 NCEs
1980-81				(Mathematics)		
Grade 3	22	2	17	35	-	36
Grade 4	17	1	8	34	-	17
Grade 5	14	4	15	31	-	11
Grade 6	20	10	21	28	-	19
Gain Across Grades:		16.5 NCEs		Gain Across Grades:		
1981-82				(Mathematics)		
Grade 3	30	5	12	30	32	23
Grade 4	34	14	24	34	38	34
Grade 5	21	9	8	21	18	18
Grade 6	18	12	26	18	14	20
Gain Across Grades:		7.4 NCEs		Gain Across Grades:		-1.5 NCEs

Spanish Reading and Math Over the Four Years of CUMBRE

Prueba de Lectura
Spanish Language Arts

1978-79	N	RS	RS	SD	SD	t value	Significance
Grade 3	24	42.5	55	13.9	13	7.655	0.1 level
Grade 4	28	22.1	23.3	10.5	8.8	0.688	
Grade 5	31	18	19.8	9.6	7.5	0.880	
Grade 6	16	32.2	43.6	15.1	22.2	3.800	0.1 level

CTBS Espanol

	Spanish Total Reading			Spanish Math Computation		
		Spg. 79	Spg. 80		Spg. 79	Spg. 80
1979-80	N	%ile	%ile	N	%ile	%ile
Grade 3	34	-	22	35	-	15
Grade 4	26	-	21	26	-	16
Grade 5	27	-	23	29	-	13
Grade 6	31	-	20	31	-	21
1980-81						
Grade 3	27	45	42	27	59	61
Grade 4	25	22	32	25	16	20
Grade 5	20	22	25	20	19	31
Grade 6	21	25	31	22	30	35
Gain Across Grades:		4.0 NCEs		Gain Across Grades:		3.6 NCEs
1981-82						
Grade 3	31	31	37	30	38	27
Grade 4	34	28	46	34	52	59
Grade 5	21	40	29	21	36	41
Grade 6	18	22	31	18	37	53
Gain Across Grades:		5.5 NCEs		Gain Across Grades:		1.4 NCEs

English Oral Language Proficiency Over the Three Last Years of CUMBRE

1979-80	N	Fall RS	Spg. RS	Fall SD	Spg. SD	r	t value	significance
K	33	39.3	30.1	28.5	28.1	.77	2.748	.01 level (regressed)
Grade 1	43	42.3	57.2	22.6	27.1	.87	7.395	.01 level
Grade 2	35	52.6	71.9	18.8	17.9	.76	9.083	.01 level
Grade 3	34	61.9	77.1	18	16.4	.84	9.122	.01 level
Grade 4	27	68.5	79.7	16.6	10.9	.78	5.524	.01 level
Grade 5	30	76.2	84.5	17.4	20.1	.88	4.686	.01 level
Grade 6	30	80	89.2	13.6	12.5	.67	4.736	.01 level
1980-81		Spg.80 RS	Spg.81 RS	Spg.80 SD	Spg.81 SD			
K	4	-	-					
Grade 1	30	35.8	62.6	24.4	19.3	.62	7.493	.01 level
Grade 2	36	56.3	62	24.9	24.5	.75	1.971	.05 level
Grade 3	34	71.9	81.2	17.4	14.9	.63	3.838	.01 level
Grade 4	29	71.9	87.5	19.2	7.6	.59	5.266	.01 level
Grade 5	21	76.2	88.8	18.9	15.8	.91	7.164	.01 level
Grade 6	25	85.3	90.8	17.8	8.4	.85	2.401	.05 level
1981-82		Spg.81 RS	Spg.82 RS	Spg.81 SD	Spg.82 SD			
K	62	-	27.8	-	23.5			
Grade 1	25	34.3	55.3	31.4	17.8	.61	4.209	.01 level
Grade 2	19	61.1	66.8	20.2	22.9	.82	1.912	.05 level
Grade 3	34	61.5	75.3	26.3	18.5	.70	4.277	.01 level
Grade 4	23	85.6	90.2	12.6	9.3	.64	2.236	.05 level
Grade 5	16	89.6	84.4	7.9	6.7	.60	3.156	.01 level (regressed)
Grade 6	17	89.6	87.5	11.3	10	.41	0.750	not significant

Spanish Oral Language Proficiency Over the Last Three Years of CUMBRE

1979-80	N	Fall RS	Spg RS	Fall SD	Spg SD	r	t value	Significance
K	31	64.8	63.8	20.4	19.9	.71	0.338	not significant
Grade 1	45	67.8	78.8	16.1	17.2	.74	6.140	.01 level
Grade 2	34	78.3	81.6	11.5	12.4	.77	2.402	.05 level
Grade 3	34	80.5	88.6	8.7	8	.26	4.620	.01 level
Grade 4	27	76.2	84.1	12.6	10.9	.55	3.676	.01 level
Grade 5	30	79.3	82.1	14.5	19.9	.89	1.577	not significant
Grade 6	30	79.9	87.4	11.9	8.5	.37	3.493	.01 level
1980-81		Spg.80 RS	Spg.81 RS	Spg.80 SD	Spg.81 SD			
K	32	45.2	64.7	17.4	17.6	.52	6.401	.01 level
Grade 1	31	65.1	78.3	15.8	12.3	.47	4.989	.01 level
Grade 2	38	77.5	81.7	17.4	12.8	.68	2.039	.05 level
Grade 3	34	82.3	86.2	12.4	10	.62	2.307	.05 level
Grade 4	28	87.4	92.1	9.6	5.5	.56	3.094	.01 level
Grade 5	21	78.9	85.9	20.4	22.6	.69	1.855	.05 level
Grade 6	25	81.3	87	21.2	15.6	.91	2.990	.01 level
1981-82		Spg.81 RS	Spg.82 RS	Spg.81 SD	Spg.82 SD			
K	62	-	56.2	-	17.3			
Grade 1	33	65.7	79.7	21.9	11.6	.77	5.429	.01 level
Grade 2	21	78.4	80.3	15.4	15	.67	0.703	not significant
Grade 3	35	82.8	88.7	12.2	7.7	.59	3.556	.01 level
Grade 4	23	89	91.4	9.8	6.6	.37	1.182	not significant
Grade 5	16	93.3	87.9	5.5	6	.33	3.264	.01 level
Grade 6	17	94.1	89.3	6.5	8.6	.41	2.307	.05 level

During the first two years of CUMBRE, English reading growth did not progress much differently than that expected of national norm students (maintaining percentile standing). In year 1 students progressed slightly less than norm rate and in year 2 slightly more than norm rate of growth. But in years 3 and 4, significant advancement beyond the norm group pattern was shown both years, with year 3 results most spectacular.

In math, CUMBRE students about equaled norm group rate of growth during the first year, and progressed slightly less than the norm during the second and fourth year of the project. No record of advancement could be recorded for the third year as the school system switched to the newest edition of the Metropolitan Achievement Tests.

In Spanish language arts testing during the first year, students made significant gains in half of the grade levels tested. During the second year the CTBS Espanol was introduced for the first time so no previous yearend scores were available to determine growth. Using the new test instrument, the third-year CUMBRE students progressed in Spanish reading at a rate slightly greater than norm group expectations; and in the fourth year, Spanish reading progress of CUMBRE students exceeded norm group rate of growth by a significant amount. Spanish math progress was a little better than the norm group pattern for the third and fourth years of CUMBRE, the only years in which gain scores could be compared.

English oral language skills of CUMBRE students advanced significantly at most all grade levels during the second through the fourth year of CUMBRE whenever students did not as a group score near the test instrument ceiling.

In Spanish language skills, students advanced more consistently across grade levels during the second and third year than they did during the fourth year; however, fourth year attainment levels of CUMBRE students in grades 4-6 were higher. There was no oral language skill testing administered during the first year of CUMBRE.

Summary of Results and Conclusions

A total of 279 students attended Ann Street Bilingual School in 1981-82, the fourth and final year of federal Title VII funding for the project. The great majority of students in the Hartford bilingual school were Hispanic. Of the total school enrollment, 68% were Spanish dominant, 26% bilingual, and 6% English dominant. For the Spanish dominant students, the instructional program started in the mother tongue with the introduction of English language classes increasing in emphasis at each successive grade level. The Hartford Board supported the teachers, part-time specialists, and the cost of operating the facility. Title VII financed the educational assistants, specialists, the coordinator, and the director.

Statistically significant progress was shown in Spanish oral language development and in English basic concepts for children attending a full-day kindergarten, and also those attending a transitional class. These results exceed the standards set for Objective 1 of the program.

Grade 1-6 students advanced significantly in English oral language skills up to the point where students in higher grade levels began scoring near the ceiling of the test instrument thereby limiting their potential to show further growth. Spanish oral language growth was not as strong with significant gains taking place in only half of the grade groupings. Upper grade students also scored near the ceiling of the test instruments. These results are interpreted as meeting the expectations of Objective 2 in English oral language growth, but not so in Spanish oral language growth.

In Spanish reading, CUMBRE students exceeded norm group growth by an amount that would be considered educationally significant, but in Spanish math, students generally progressed approximately at norm group rate of growth. These results met program Objective 3 in Spanish reading, but did not meet the expectation in the area of Spanish math. Noteworthy though is the fact that three of the five grade levels of Spanish math posttest scores exceeded grade level attainment.

In English reading, Ann Street Bilingual School students progressed significantly beyond the rate usually expected of norm group students making two very successful years of English reading progress for these students. In English mathematics, Ann Street Bilingual School students progressed at a rate slightly less than national norm progress. These results show that CUMBRE students met Objective 4 in terms of English reading, but not in terms of English math.

Reading and math progress of Ann Street Bilingual School graduates exceeded norm group rate of growth thereby meeting the standards set for Objective 5.

Two follow-ups of Ann Street School graduates showed these students not only exceeding norm group rate of growth in reading for both 7th and 8th graders, but also attending school more regularly, and getting along with classmates at the middle school much better than other middle school students of the same grade level. Hence, the expectations for Objective 6 were met.

Compared to Hispanics in Hartford's regular classrooms, Ann Street Bilingual students about equaled their rate of growth in English reading, but

made less advancement in English math than the Hispanic mainstreamers. The Hispanic sample had some limitations in terms of representative and sample sizes at several grade levels. These findings nevertheless showed Ann Street Bilingual School students meeting Objective 7 in terms of English reading, but not in terms of English math.

Ann Street Bilingual School staff had recorded the minimum competencies passed by their students in the areas of English, language art, and math thereby meeting the intent of Objective 8.

Parents, during the fourth and final year of the CUMBRE Project, far exceeded the expectations established for Objective 9. Seventy-eight % of all parents visited the school during the year. An average of about nine parents per classroom took on responsibilities in organizing and participating in major school activities and functions. Also, 58 parents took part in four parent education courses offered by the Ann Street Bilingual School.

Going beyond the evaluation in terms of objectives, test results over the four year period would support the greatest strengths of CUMBRE to be English reading progress in the last two years, Spanish reading progress during the last year and English oral language skills over the last three years. Math progress was not found to be a strength over the years of Project CUMBRE.

Recommendations

The three recommendations made based on the findings of this evaluation have attempted to take into consideration the fact that, at the time of this writing, the Ann Street Bilingual School students are now part of the larger school population of Barnard Brown School, and, that the Title VII CUMBRE resources are no longer available to provide the valuable services of specialists, educational materials, and staff training benefits of past years. Nevertheless, the bilingual curriculum for these students is still intact, and the evidence gathered from systematic evaluation over the period of the federal support should be of value in deciding the future direction of programming for these students.

Speaking first to the excellent gains made in the last two years in English reading, it is recommended that the bilingual program staff review the total direct instructional time devoted during the school day to make sure that the teaching effort in this skill area is at a maximum. Also, the staff should take every opportunity to have students participate in any IRIT type intensive reading service available. While reading gain scores were impressive for these students for the past two years, their level of reading attainment even with excellent gains was relatively low, on the average, when compared to national norms.

Secondly, it is recommended that bilingual program staff have Hartford Board curriculum specialists review the program's approach to math. While attainment levels in Spanish math computation were relatively high during 1981-82 (half of the grade level groupings of students averaged above grade achievement), the spring to spring test gain has been negligible. Also, where problem solving and concepts have been part of the testing (MAT Mathematics), students have had trouble just maintaining their percentile standing.

The third recommendation is that complete test data be obtained for the Hispanic mainstream groups so that staff and parents have some idea of the relative reading and math progress of Hispanics who are enrolled in bilingual programs compared to Hispanics enrolled in regular classrooms. If bilingual program students at least equal the 12 month English reading gains of Hispanic mainstreamers, then Hartford should submit application for national validation for their bilingual program efforts as few Spanish bilingual programs nationally have attained excellent English reading gains over the course of the elementary grade levels where Spanish language has been the main emphasis in classroom instruction. Recognition for a "proven program" which a national validation would bring would encourage staff efforts in this direction even further.

ATTACHMENT A

Follow-up Survey Instrument

ANN STREET BILINGUAL COMMUNITY SCHOOL

321 ANN STREET • HARTFORD, CONNECTICUT 06103 • (203) 566-6870, 6871

May 28, 1982

EDNA F. SOLER
DIRECTOR

TO:

FROM: Mrs. Soler, Director of Ann Street Bilingual School

I am following up the school progress of students who graduated from the Ann Street Bilingual School. Would you please help me by taking a few minutes, responding to the questions below, and returning the completed form in the addressed envelope by inter-office mail?

The questions refer to the school progress of . Please rate each question by underlining the short answer you think is most accurate.

_____ _____ _____

Compared to other students of the same grade level in this school,

a. Attends school...

(more often) (about the same as) (less often) (uncertain)

b. Does homework...

(more often) (about the same as) (less often) (uncertain)

c. Participates in class...

(more often) (about the same as) (less often) (uncertain)

d. Gets along with classmates...

(better than) (about the same as) (not as well as) (uncertain)

e. Gets school grades...

(better than) (about the same as) (not as good as) (uncertain)